Forum Series on the Role of Institutions in Promoting Economic Growth

Comments by John List on Clifford Zinnes and Omar Azfar's *"Looking Before you Leap: Designing and Testing Culturally Compatible Reforms"*

Forum 5: NIE-Based Toolkits for USAID Applications

Session 4

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Instrument Design

Contingent Valuation

A. Hypothetical bias and an incentive-compatible elicitation device are two distinct concepts.

Using the latter does not "cure" problems with the former.

Economic theory has nothing to say about purely hypothetical behavior: there are no incentives (rewards, costs, etc.).

B. Economic theory can say something about the realm of "consequential" questions.

When is a question "consequential"?

1. **Agent must perceive responses to the question as potentially influencing an agency outcome.**

2. **Agent needs to care about the outcome.**

After consequentialism is settled, then one can turn to the actual mechanism design.

No survey response format that allows for more than a binary response can be incentive compatible without assuming restrictions on the realm of allowable agent preferences. This includes all multinomial and continuous (open-ended) survey response formats.

Intuition: Think of the most recent Presidential election. Green voters' true preferences may have been in favor of Nader. Yet, knowing that he could not win, many of them voted instead for Gore. Thus, the mechanism itself does not induce true preferences for these individuals.

TCAR uses binary choice questions.

Interpretation of choices:

V(r,m,q): indirect utility function (describes well-being a person can achieve with current prices (r), income (m), and good of interest (q).

Question: Will you pay T for this service?

Yes
$V(r,m-T,q^*) > V(r,m,q^0)$—T is a *lower bound* economic value.

No
$V(r,m-T,q^*) < V(r,m,q^0)$—T is an *upper bound* economic value.

Indifferent
$V(r,m-T,q^*) = V(r,m,q^0)$—T is willingness to pay.

Experiments

Economic theory suggests that market failures arise when contracts are difficult to enforce or observe. Social capital can help to solve these failures.

Indeed, I find social capital as the big lacuna of this research agenda.

What do we know and what can this research provide?

"Business Deal" Game

Contracts with no monetary incentives are compared to *contracts with explicit monetary incentives (by punishing non-desired behavior)*

Study variants of the *investment game* (Berg, Dickhaut, McCabe 1995)

trust game: investor specifies the desired payback

→ actual payback is observable but no punishment option

punishment game: investor specifies the desired payback

→ actual payback is observable and investor has the possibility of specifying explicit monetary incentives through the (costless and non-probabilistic) punishment of non-desired behavior

Questions:

- Does a contractually specified punishment increase the investor's payoff?
- Or does a contractually specified punishment reduce voluntary cooperation and reciprocity?
- Is there a difference between having the punishment option and failing to use (in the punishment game) and not having it at all (in the trust game)?

What do we already know?

- Bewley (1999) reports from his interview studies with managers the statement that workers perform better if they are not threatened (and are not supervised too closely).

- Fehr, Gächter, and Zanella (1999) study the *gift exchange game* with the possibility of a probabilistic and redistributional punishment in a repeated interaction setting. They find that choosing a punishment contract crowds out reciprocity and leads to efficiency losses.

- Psychological studies (e.g. Deci 1971) and experimental studies by Gneezy and Rustichini (1999) indicate that monetary incentives may reduce intrinsic motivation.

- Fehr and List (2002) find that contractually specified punishment crowds out voluntary cooperation and reciprocity.

The Model

	Trust Game	Punishment Game
players and endowment	two players: investor and responder, both endowed with 10 “units”	
decision of the investor	investor can send any integer amount $0 \le x \le 10$ to responder investor specifies desired payback $0 \le d \le 3x$ ----	investor chooses whether a deduction of 4 (p=4) or no deduction (p=0) will be subtracted from the responder’s payoff in case he/she sends back less than d
transfer	responder receives 3x	
decision of the responder	responder can send back any integer amount $0 \le y \le 3 \cdot x$ to investor	
investor’s payoff	10 - x + y	

responder's payoff	$10 + 3 \cdot x - y$	if $y < d$: $10 + 3 \cdot x - y - p$ if $y \geq d$: $10 + 3 \cdot x - y$

Game Theoretic Solution

Trust Game

- desired payback is just 'cheap talk'
- the unique subgame perfect equilibrium: $x=0$, $d=0$, $y=0 \rightarrow Payoff_{Investor} = 10$ and $Payoff_{Responder} = 10$

Punishment Game

in case the investor chooses no deduction (p=0):

→ unique subgame perfect equilibrium: x=0, d=0, p=0, y=0 → $Payoff_{Investor}$ = 10 and $Payoff_{Responder}$ = 10

in case the investor chooses a deduction (p=4):

→ there are 2 subgame perfect equilibria in which the investor can enforce the desired payback: (x=1, d=3, p=4, y=3) → $Payoff_{Investor}$ = 12 and $Payoff_{Responder}$ = 10

and

(x=2, d=4, p=4, y=4) → $Payoff_{Investor}$ = 12 and $Payoff_{Responder}$ = 12

The **Pareto efficient solution** in both games is that the investor sends the total endowment x=10

Should one use context in this case?

Would neutral terminology yield different insights?

Terminology such as "people may resent it when interactions they consider fair are not respected" represents a potential loss in control, as one does not know if this terminology affects behavior in the experiment—perhaps some SMEs have *ex ante* notions of the "fair" profit margins a firm of this type should receive.

Collective Action Game

Provision point mechanism—again rich environment

Risk Aversion Game